SONY

# Compact Disc Player

Operating Instructions

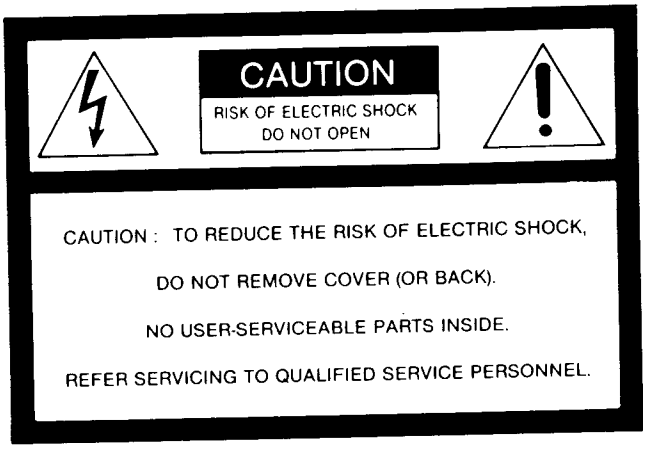
COMPACT disc DIGITAL AUDIO

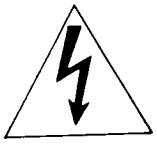
## Owner's Record

The model and serial numbers are located at the rear. Record this numbers in the spaces provided below. Refer to these numbers whenever you call upon your Sony dealer regarding this product.

## Warning

**To prevent fire or shock hazard, do not expose the unit to rain or moisture.**


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION : TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

## Information

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient the receiving antenna
Relocate the equipment with respect to the receiver
Move the equipment away from the receiver
Plug the equipment into a different outlet so that equipment and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful:
"How to Identify and Resolve Radio-TV Interference Problems". This booklet is available from the U.S. Government Printing Office, Washington, DC 20402, Stock No. 004-000-00345-4.

**CAUTION**

The use of optical instruments with this product will increase eye hazard.

As the laser beam used in this compact disc player is harmful to the eyes, do not attempt to disassemble the cabinet.
Refer servicing to qualified personnel only.

# Table of Contents


**Introduction** ..... 3
**Safety Precautions** ..... 4
**Installation** ..... 4
**Connections** ..... 5
**Location of controls** ..... 6
Front panel ..... 6
Remote commander ..... 7
**Installing Batteries in the remote commander** ..... 7

**Playing a disc** ..... 8
Information display ..... 9
Locating a particular selection ..... 9
Locating a particular point in a selection ..... 9
Locating an index ..... 9
**Playing in a random order – Shuffle play** ..... 10
**Playing repeatedly – Repeat play** ..... 11
Repeating selections ..... 11
Repeating a particular portion – A↔B repeat ..... 11
**Playing in a desired order – Program play** ..... 12
**Designating the playing order and Time – Program edit** ..... 14
**Designating the total playing time – Time edit** ..... 15
**Designating the playing order of up to 6 discs – Multi-disc program** ..... 16
**Tips on editing tapes** ..... 18
Fading out at the desired time – Time fade ..... 18
Fading in/Fading out ..... 19
Inserting a blank space between selections – Auto space ..... 19
Locating the loudest portion of the disc – Peak search ..... 19

**On custom files** ..... 20
Four custom files you can store in memory ..... 20
**Keeping the program in memory – Program bank** ..... 21
Memorizing a program ..... 21
Playing the disc using the program bank ..... 21
Clearing the program bank ..... 21
**Assigning names to a disc – Disc memo** ..... 22
Clearing the disc memo ..... 22
**Giving a disc indexes as you want – Custom index** ..... 23
Playing from the desired custom index ..... 23
Clearing custom indexes ..... 23
**Storing an optimum playback level for each disc – Level file** ..... 24
**Timer activated playing** ..... 25
**Maintenance** ..... 26
Cleaning your unit ..... 26
Cleaning discs ..... 26
**Specifications** ..... 26
**Troubleshooting guide** ..... 27


This indicates a function operated only from the remote commander.

This indicates a function operated only on the main unit.

# Introduction

## Enjoy listening in various playing modes

You can select the playing modes among the following:

| | |
|---|---|
| Continuous play (page 8) | – The entire disc is played once. |
| Shuffle play (page 10) | – Selections are played in a random order. |
| Repeat play (page 11) | – Selections or portion are played repeatedly. |
| Program play (page 12) | – Selections are played in your desired order. |

## Editing your own tapes

- You can fade in or out the play when making your own tape recording. – Fade in/Fade out (page 19)
- CUSTOM EDIT function
  - You can confirm the total playing time while choosing the selections to be programmed. – Program edit (page 14)
  - The player can program selections automatically to fit in a desired duration. – Time edit (page 15)
  - You can stop the play, fading out at the time desired. – Time fade (page 18)
  - You can designate the playing order of up to 6 discs. – Multi-disc program (page 16)
  - The loudest portion of the disc will be determined and played repeatedly. – Peak search (page 19)

## Making your disc custom-made – CUSTOM FILE function

- You can assign a name to a disc, such as the title of the disc or the date of purchase. – Disc memo (page 22)
- You can assign your own index point to any desired position on a disc. – Custom index (page 20)
- You can store the programmed playing order for a disc. – Program bank (page 21)
- You can store the optimum playback level of each disc in the unit's memory. – Level file (page 24)

## You can make a 3-second blank between selections

The blank space enables you to locate selections when using a tape deck with the automatic selection search function.

## Easy-to-see display

The selection number, the playing time, the remaining time are displayed by pressing the button. And also playing modes like repeat, shuffle, program are displayed in the display window.
In addition, you can change a desired display information by selecting 3 patterns.

# Safety Precautions

- Check the unit's operating voltage before operation. It must be identical with that of your local power supply.

- Stop operation immediately if any liquid or solid object should fall into the cabinet. Unplug the unit and have it checked by qualified personnel.

- Unplug the unit from the wall outlet if you will not use it for a long time. Disconnect the cord by grasping the plug. Never pull the cord itself.
  The unit is not disconnected from the mains as long as it is plugged into the wall outlet, even if the unit itself has been turned off.

- Do not disassemble the cabinet. The laser beam used in this unit is harmful to the eyes when uncovered. Refer servicing to qualified personnel only.

For detailed safety precautions, see the leaflet "IMPORTANT SAFEGUARDS".

If you have any questions or problems concerning your unit, please contact your nearest Sony dealer.

# Installation

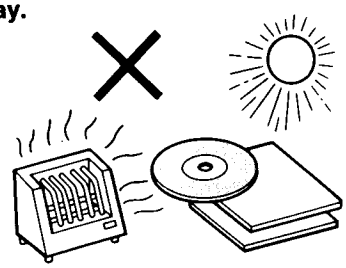
## Placing Your Unit

- Place the unit in a location with adequate air circulation to prevent internal heat build up in the unit.

- Do not place the unit on a soft surface, such as a rug that would block the ventilation holes on the bottom.

- Do not install the unit:
  - near heat sources such as radiators or air ducts.
  - in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.

**Not this way.**



**On moisture condensation**
If the player is brought directly from a cold to a warm location, or is placed in a very damp room, moisture may condense on the lens inside the unit. Should this occur, the player will not operate. In this case, remove the disc and leave the player turned on for about an hour until the moisture evaporates.

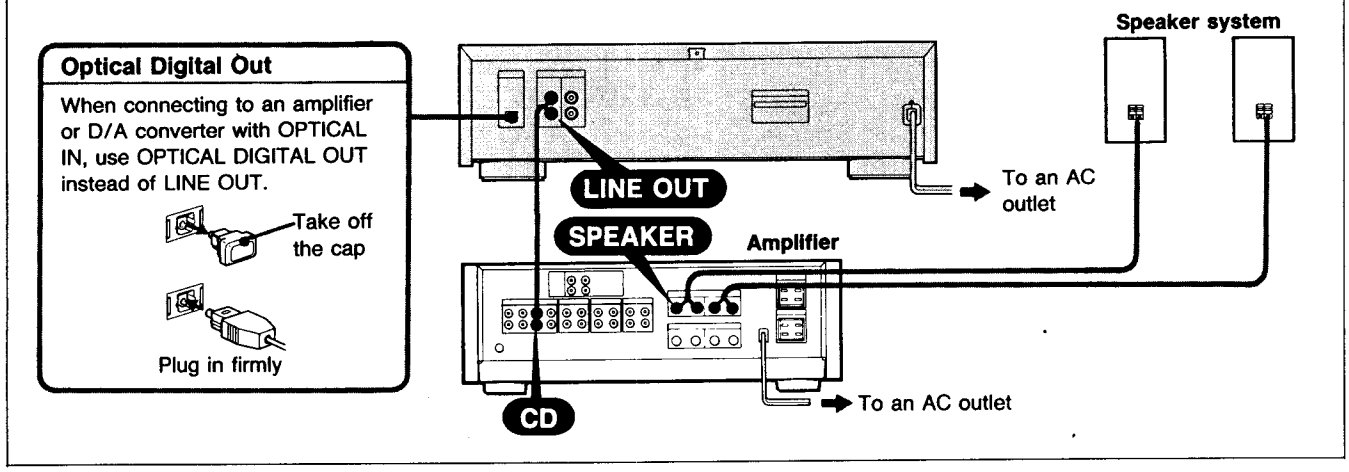
# Connections

**You can connect the unit with analog or digital signal depending on your amplifier or D/A converter.**

## For Correct Connections

- Turn off the power of each unit before making connections.
- Connect the AC power cord last.
- Be sure to insert the plugs firmly into the jacks. Loose connection may cause hum and noise.
- Leave a little slack in the connecting cord to allow for inadvertent shock or vibration.
- Cord plugs and jacks are color coded: Red plugs and jacks are for the right channel (R) and white ones for the left channel (L).

## To Connect to an Amplifier


Optical Digital Out
When connecting to an amplifier or D/A converter with OPTICAL IN, use OPTICAL DIGITAL OUT instead of LINE OUT.
Take off the cap
Plug in firmly
Speaker system
LINE OUT
SPEAKER
Amplifier
To an AC outlet
CD
To an AC outlet

**Note on DIGITAL OUT**

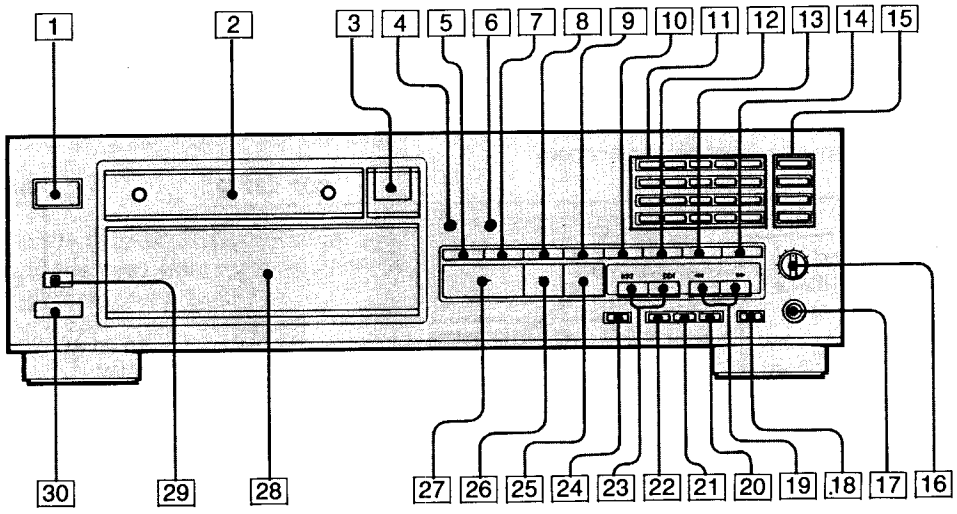
When connecting with DIGITAL OUT (OPTICAL), use the POC-15 audio optical connecting cord (optional).
Please note that when the digital out is connected, fade out, fade in, time fade and level file functions cannot be used.

**Notes on LINE OUT**

- Normally connect the cable to FIXED. (The output level is fixed.)
  Control the volume with the amplifier's volume control.
  To use the level file function, connect the cable to VARIABLE.
- When you connect the unit to a power amplifier, connect the cable to VARIABLE and control the volume with the LINE OUT/PHONE LEVEL control.
  However, if the LINE OUT/PHONE LEVEL control is turned while recording, the recording level will change even when it is preset on the tape deck.

# Location of Controls

## Front Panel

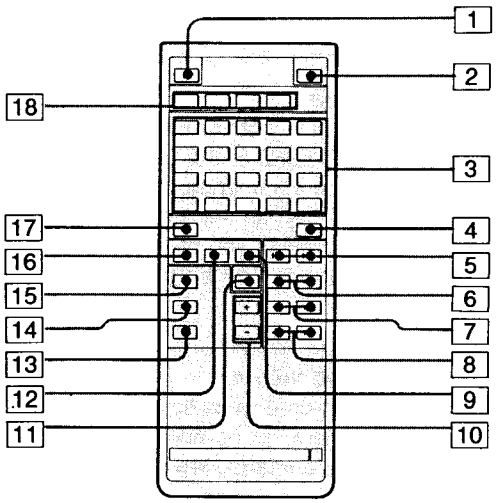



Refer to the pages indicated in ● for details.

1 POWER switch ❽
2 Disc tray ❽
3 ⏏ (open/close) button ❽
4 DISPLAY MODE button ❾
5 REPEAT button ⓫
6 TIME/MEMO button ❾
7 FADER (fade in/fade out) button ⓲
8 CHECK (program check) button ⓬
9 CLEAR (program clear) button ⓬
10 FILE (custom file) button ⓴
11 Numeric buttons ❾
12 ERASE (memory erase) button ⓴
13 >20 (over 20) button ❾
14 MULTI PGM (program) button ⓰
15 PLAY MODE buttons
CONTINUE button ⓾
SHUFFLE button ⓾
PROGRAM button ⓬
C. (custom) INDEX button ㉓
16 LINE OUT/PHONE LEVEL control ❽
17 HEADPHONES jack
18 LEVEL FILE button ㉑
19 ◀◀ ▶▶ (manual search) buttons ❾
20 TIME SET button ⓯
21 EDIT/TIME FADE button ⓯
22 PEAK SEARCH button ⓳
23 ⏮ ⏭ (AMS*) buttons ❾
24 FILE RECALL button ⓴
25 ■ (stop) button ❽
26 ❚❚ (pause) button ❽
27 ▶ (play) button ❽
28 Display window
29 TIMER switch ㉕
30 Remote sensor

* AMS is the abbreviation of Automatic Music Sensor.

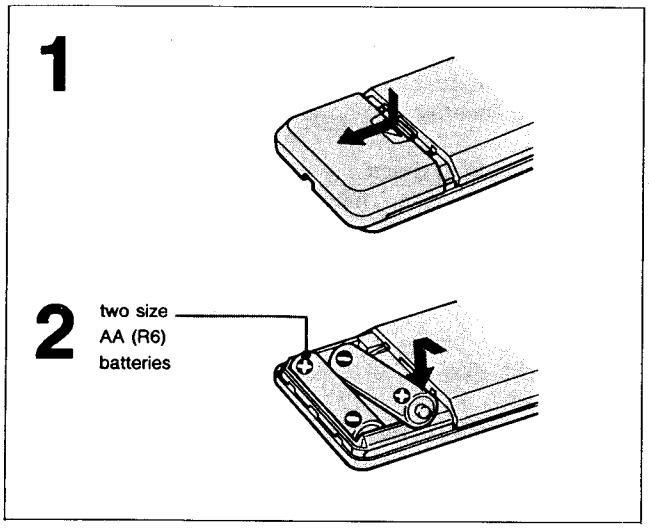
## Remote Commander




Refer to the pages indicated in ● for details.

1 ⏏ (open/close) button ❽
2 DISPLAY MODE button ❾
3 Numeric buttons ❾
4 FILE (custom file) button ⓴
5 ⏮ ⏭ (AMS) buttons ❾
6 ← → INDEX buttons ❾
7 ◀◀ ▶▶ INDEX buttons ❾
8 ◀◀ ▶▶ SLOW (low speed manual search) buttons ❾
9 AUTO SPACE button ⓳
10 LINE OUT VOLUME (line out/headphone volume) buttons ❽
11 FADER (fade in/fade out) button ⓲
12 A ↔ B repeat button ⓫
13 ■ (stop) button ❽
14 ❚❚ (pause) button ❽
15 ▶ (play) button ❽
16 CLEAR/REPEAT button (A ↔ B repeat clear/repeat) button ⓫
17 >20 (over 20) button ❾
18 PLAY MODE buttons
CONTINUE button ⓬
SHUFFLE button ⓬
PGM (program) button ⓬
C. (custom) INDEX button ⓭

# Installing Batteries in the Remote Commander



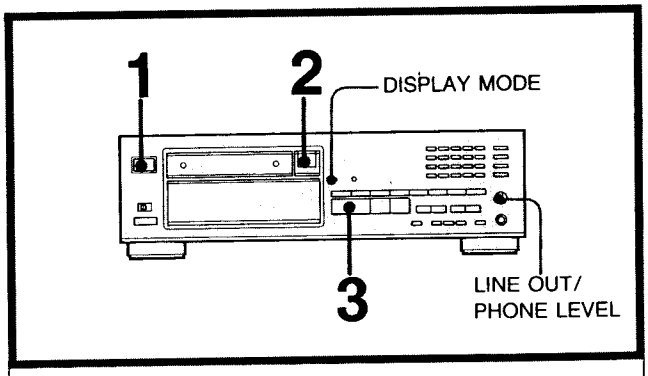

**On battery life**

- About half a year of normal operation can be expected when using the Sony SUM-3(NS) batteries.
- When the batteries are run down, the remote commander will not operate the unit. In this case, replace both batteries with new ones.

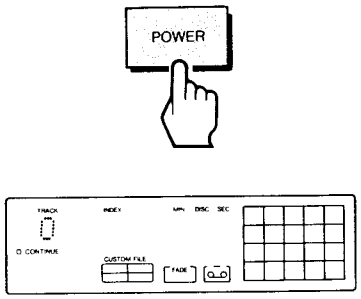
**Notes on the remote commander and remote control operation**

- Keep the commander away from extremely hot or humid places.
- Avoid dropping any foreign objects into the commander casing, particularly when replacing the batteries.
- Avoid exposing the remote sensor to direct sunlight or lighting apparatus. Such exposure can cause a malfunction.
- To avoid damage caused by battery leakage and corrosion, remove the batteries when the commander will not be used for a long time.

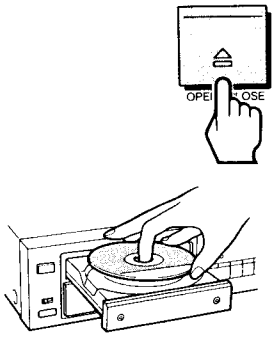
# Playing a Disc
## – Continuous play




**1**

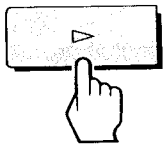



**2**

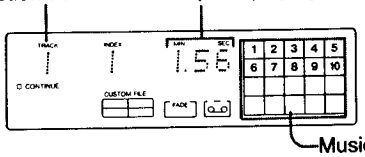


With the printed side up

**3**



Selection number  Elapsed playing time




Music calendar

**To stop play**

To stop for a moment during play, press ❚❚.
Press ❚❚ or ► to resume play.
To stop play, press ■.
To stop play and open the tray, press ⏏.

**When using with the stereo system**

Turn on the amplifier, and select "CD" of the input selector to listen to the compact disc player.

**To control the volume**

When you use VARIABLE, control the volume with LINE OUT/PHONE LEVEL control of the player or LINE OUT VOLUME of the remote commander. Press + of the remote commander to turn up the volume and press – to turn down the volume. When you press + or –, the LINE OUT/PHONE LEVEL control of the player rotates automatically.

**Caution on adjusting volume**

Do not turn up the volume while listening to a portion with very low level inputs or no audio signals. If you do, the speakers may be damaged when a peak level portion is played.

**Note on the TIMER switch**

Leave the TIMER switch off when not setting timer activated play. (For further details, refer to page 25).

***If a disc contains more than 20 selections***

► appears in the display window instead of the total number of selections.

***What is this indication?***

-NO DISC-

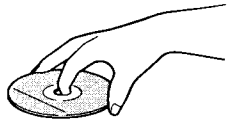
This indication appears when there is no disc in the disc compartment. The indication can be changed to the desired indication. (page 22)

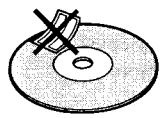
**To play a 3-inch (8 cm) CD**

Place it on the inner circle of the tray. If the disc is provided with an adaptor, first remove it. Do not put a normal CD (5-inch/12 cm) on top of an 3-inch CD.

**Notes on handling discs**

- To keep the disc clean, handle the disc by its edge. Do not touch the surface.
- Do not stick paper or tape on the disc.





- Do not expose the disc to direct sunlight or heat sources such as hot air ducts, or leave it in a car parked in direct sunlight as there can be a considerable rise in the temperature.
- After playing, store the disc in its case.

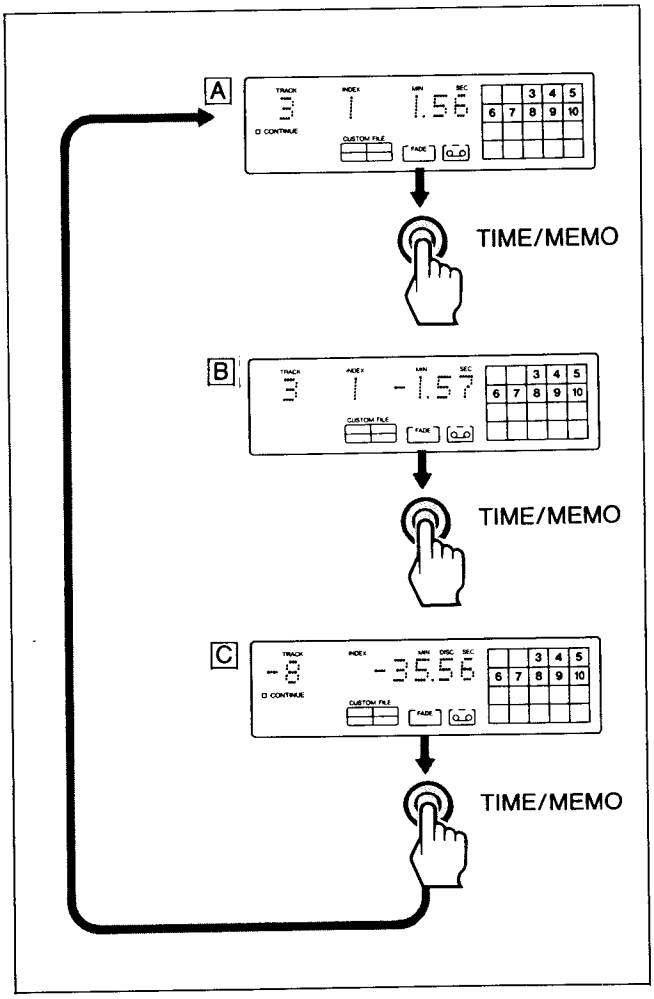
## Information Display

Each time you press TIME/MEMO during play, the display changes to give you the following information.

A Elapsed playing time

B Remaining time in a selection
If the current selection number is over 25, "-----" is displayed.

C Remaining number of selections and total remaining time.




***If you have stored a disc memo***
The stored disc memo will be displayed, following the display of the remaining time of the disc.

**To change the parts of information display**
Each time you press the DISPLAY MODE during play, the display changes to give you the following information.

→ Entire display ON → Track number, Play mode and Music calendar ON → Entire display OFF →

## Locating a Particular Selection

You can locate the beginning of a desired selection during play or pause.

**To locate sequentially**

**To locate the beginning of the current or preceding selection**
- Press ⏮ as many times as required.
- Keep ⏮ pressed to skip selections.

**To locate the beginning of a succeeding selection**
- Press ⏭ as many times as required.
- Keep ⏭ pressed to skip selections.

***When you press ⏮ during play***
The player locates the beginning of the selection.

**To locate directly**
Press one of the numeric buttons ( 1 to 20 ) to enter the desired selection number.
If a selection number is greater than 20, use the >20 and 1 to 10 buttons. 10 functions as the figure 0.
e.g. To play from selection No.22 Press >20 2 2
To play from selection No.30 Press >20 3 10

## Locating a Particular Point in a Selection

You can locate a particular point in the disc during play.

**To search quickly while monitoring the sound**

**To go ahead at high speed**
Keep ⏩ pressed during play and release at the desired point.

**To go back at high speed**
Keep ⏪ pressed during play and release at the desired point.

**To search quickly by observing the display**
Press ⏸, then keep ⏪ or ⏩ pressed. The search speed will increase, but there will be no sound. Find the desired point by observing the display.
Press ⏸ or ▶ again at the desired point.

**To search slowly while monitoring the sound**
Press ⏪/⏩ SLOW during play and release at the desired point.

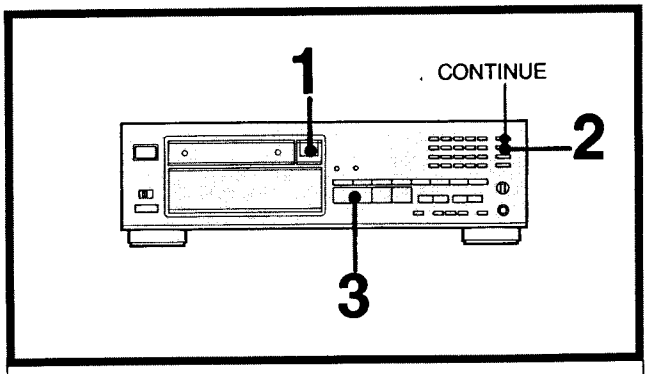
## Locating an Index

This function is only possible with a disc on which index numbers are recorded.
Press ← or →to locate the desired index number.
The selected index number appears in the display window.

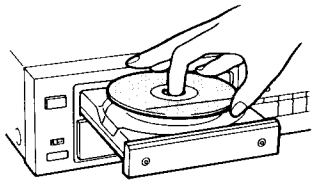
**What is an index?**
This is a number assigned to a section of a selection (for example, to a movement in a symphony) to allow that section to be located easily.

***– OVER – is displayed***
If you continuously press ⏩ at the end of the disc, – OVER – appears in the window. Press ⏪ or ⏮ to return to normal indication.
If you continuously press ⏪ at the beginning of the disc, play begins automatically from the first selection.

# Playing in a Random Order – Shuffle Play

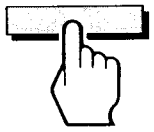



**1**

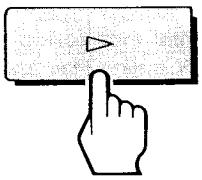


**2**

SHUFFLE



**3**



You can have the selections played in a random order. The unit will play all the selections, or just the selections you desire.

**To stop playing**
Press ■.

**To cancel shuffle play**
Press CONTINUE and return to the continuous playing mode.

***If you press SHUFFLE during play***
Shuffle play begins from the current selection.

***What is this indication?***
This indication appears while the player is "shuffling" the selections.

**To play only the desired selections in a random order – Delete Shuffle Play**
Delete the undesired selections before or during play.

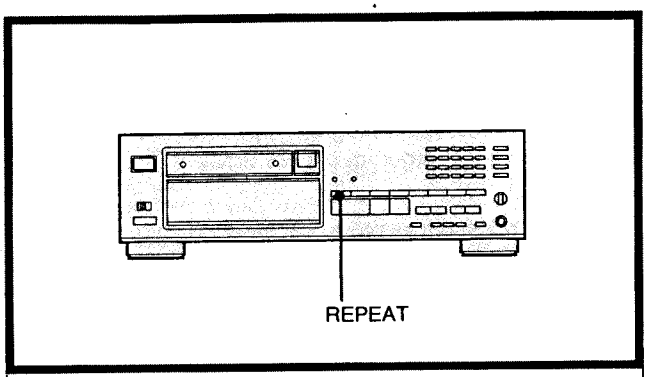
**To delete a selection,** press the numeric buttons for that selection. "DELETE" will be displayed in the window. You cannot delete a selection which is being played.
To choose a selection number over 20, see page 9.

**To put back a selection which you have deleted,** press the numeric buttons for that selection. "SELECT" will be displayed in the window.

**To put back all selections which you have deleted,** press ■ during stop.

# Playing Repeatedly – Repeat Play

## Repeating Selections




Press REPEAT (or CLEAR/REPEAT on the remote commander) before or during play.

"REPEAT" appears in the window.

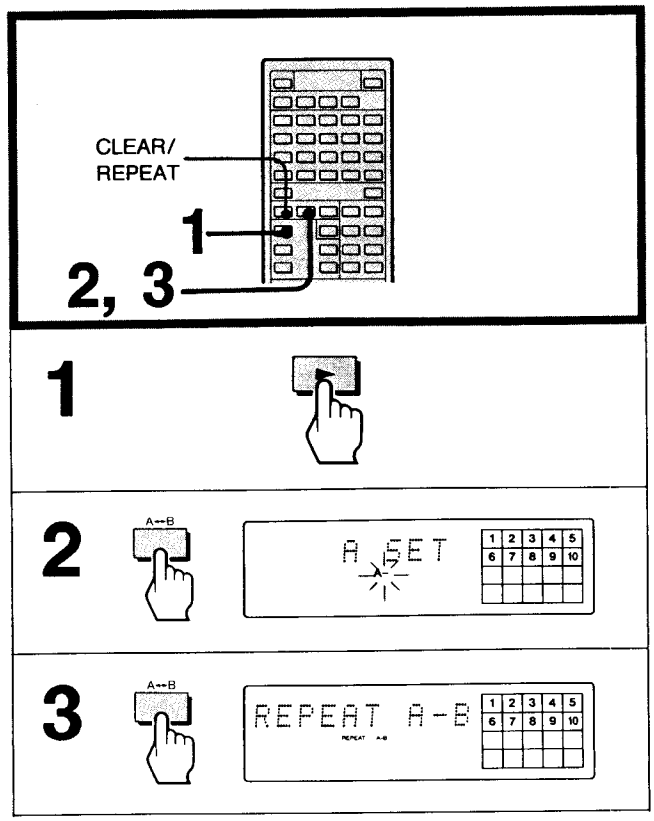
The unit repeats the current playing mode. To repeat a single selection, press REPEAT (or CLEAR/REPEAT on the remote commander) twice during the continuous playing mode. "REPEAT 1" appears.

| Playing mode | Selections to be repeated |
|---|---|
| Continuous play | All the selections or a single selection |
| Shuffle play<br>Delete shuffle play | Selections that the player reshuffles |
| Program play | All the selections programmed in the same order |
| Custom index play | Between the specific custom indexes |

**Note**
Repeat play cannot be conducted on Multi-disc programs.

**To cancel repeat play**
Press REPEAT (or CLEAR/REPEAT on the remote commander) again. "REPEAT" disappears.
To cancel repeat play of the continuous play, press REPEAT twice. "REPEAT" disappears.

## Repeating a Particular Portion – A ↔ B Repeat



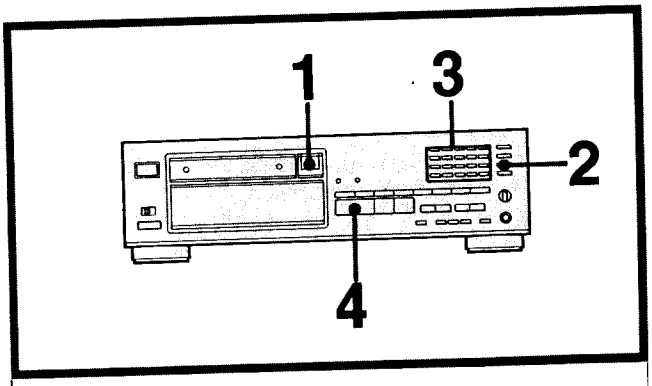

You can repeat a portion on the disc by designating the starting point (A) and the ending point (B).

**To cancel A ↔ B repeat**
Press CLEAR/REPEAT (or REPEAT on the player).

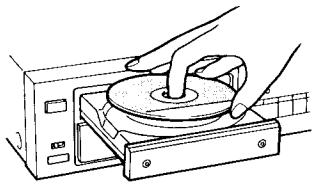
**Going back to the same point (A) from any point on the disc**
Press A ↔ B to designate the desired point (A).
(Point B need not be designated.)
You can go back to point A from any point on the disc by simply pressing ►.

***When you designate A ↔ B repeat during shuffle or program play***
You cannot designate point A and B in two different selections.

# Playing in a Desired Order – Program Play

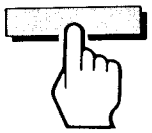



**1**

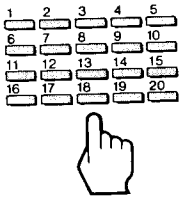


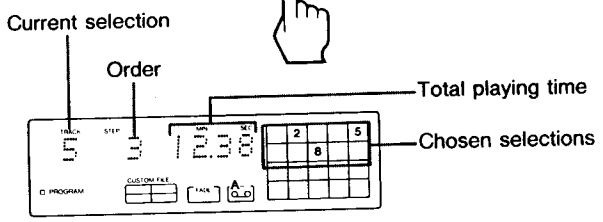
**2**

PROGRAM



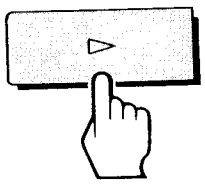
**3** Press selection number in the desired order.*




* To choose a selection number over 20, see page 9.

**4**



You can make a program by designating up to 24 selections in the order you want them to be played. The unit will play the disc according to your program.

**To stop playing**

Press ■.

You can play the same program repeatedly as long as you do not cancel program play or erase the program.

**To cancel program play**

Press CONTINUE and return to the normal playing mode. The program will be erased.

**To check your program**

Press CHECK. The first selection in the program will be displayed.

Each time you press CHECK, the next selection in the program will be displayed. When CHECK is pressed after the last selection, "END" appears and then the display returns to the initial display.

**To change your program**

You can make the following changes before starting play.

**To erase the last selection,** press CLEAR.

Each time you press CLEAR, the last selection in the program will be erased.

**To add a selection to the end of the program,** just press the numeric buttons for that selection. You can add a selection also during play or pause.

**To delete a selection,** press CHECK repeatedly until the undesired selection is displayed. Then press CLEAR.

**To change the order,** press ■ during stop to erase the program. Then repeat the programming procedure from the beginning.

**To erase the entire program**

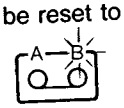
Press ■ once during stop; twice during play.

The program is also erased when you turn off the unit.

## To make a program for editing a tape

You can insert a pause in your program. Use this function to make a program for both sides of the tape at one time.

1 Program the selections for side A.
2 Press ▮▮. "P" will be displayed and the total playing time will be reset to 0.




B lights up.

3 Program the selections for side B.
When you start playing, the selections for side A will be played and then the unit will pause. Set the tape to the beginning of side B, then press ▮▮ or ►. The selections for side B will be played.

## To adjust the blank spaces between selections

In a program, if you do not change the order of selections, the spaces between those selections remain the same as on the disc. Otherwise, the spaces are shortened to 1 second. You can make all the blank spaces 3 seconds long. See page 19 for details.

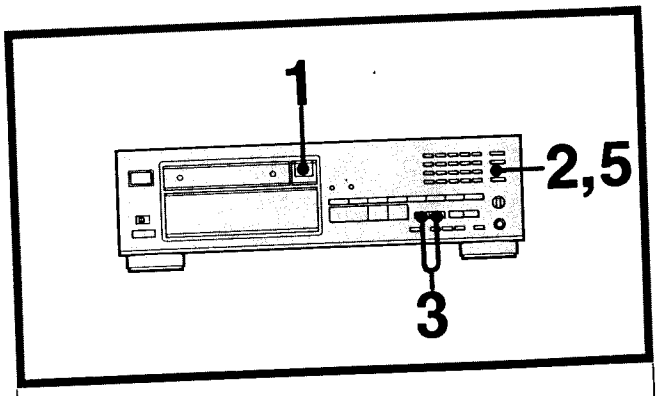
***If "---" is displayed instead of the actual time***

- You have programmed a selection number over 25.
- the total time has exceeded 100 minutes.

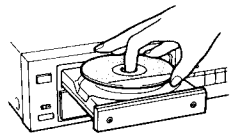
***To check the remaining time***

Press TIME/MEMO once to see the remaining time of the selection being played; twice to see the total remaining time; once more to return to the initial display.
If you have inserted a pause, the display shows the remaining number of selections and time until the pause.
If you have programmed a selection number over 25, "---" is displayed instead of the actual time.

# Designating the Playing Order and Time – Program Edit

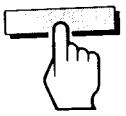



**1**

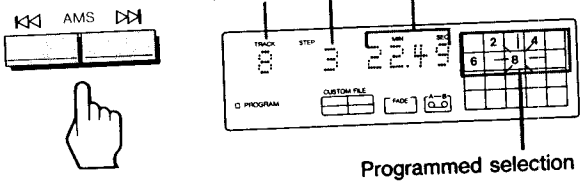


**2**

PROGRAM



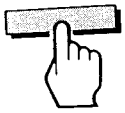
**3** Choose selection and check the time.




**4** If satisfactory go to next step.
If not repeat step 3 and choose another selection.

**5** Store selection.

PROGRAM



**6** Repeat steps 3 to 5.

You can make a program by designating up to 24 selections in the order you want them to be played. At the same time, you can adjust the total playing time of the program. The unit will play the disc according to your program. This function is convenient for editing tapes.

**To play the program**
Press ►.

**To stop playing**
Press ■.
You can play the same program repeatedly as long as you do not cancel program edit or erase the program.

**To cancel program edit**
Press CONTINUE and return to the continuous playing mode.
The program will be erased.

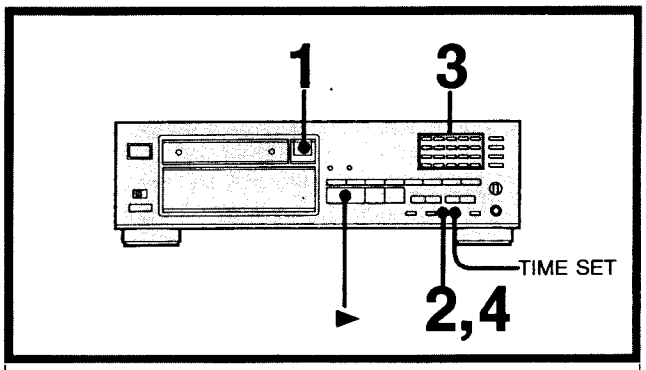
**To check or change your program**
See page 12.

**To erase the entire program**
Press ■ once during stop; twice during play.
The program is also erased, when you turn off the unit.

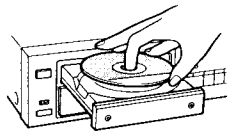
**To make a program for editing a tape**
You can insert a pause in your program. Use this function to make a program for both sides of the tape at one time.
See page 12 or details.

**To adjust the blank spaces between selections**
In a program, if you do not change the order of selections, the spaces between those selections remain the same as on the disc. Otherwise, the spaces are shortened to 1 second.
You can make all the blank spaces 3 seconds long. See page 19 for details.

# Designating the Total Playing Time – Time Edit



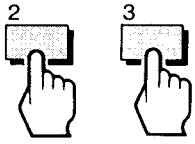

**1**



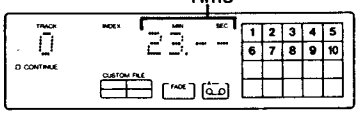
**2**

EDIT/
TIME FADE

**3** Designate the length of one side of your tape.
Example: a 46 minute tape
(23 minutes per side)




Time

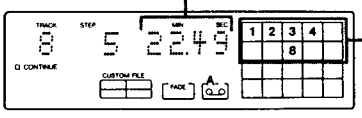


* Press [10] for "0".
You need not press keys for seconds, unless required.
You can designate the tape length easily with the TIME SET button.

**4**

EDIT/
TIME FADE

Total playing time




**5** Press EDIT/TIME FADE once more to make a program for side B.
Tape side B lights up.

You can designate a time and the unit will make 2 different programs of selections each fitting within that period. Use this function, by designating the length of your tape, for editing both sides of a tape.

**If your tape is of a standard length.**
Press TIME SET in step 3. Each time you press TIME SET, the display changes to give you the following duration:

→ 23.00(C-46) → 27.00(C-54) → 30.00(C-60) →
OFF ← 45.00(C-90) ←

**To play the program**
Press ►.
The selections for side A will be played and then the unit will pause. Set the tape to the beginning of side B, then press ❚❚ or ►.
The selections for side B will be played.

**To stop playing**
Press ■.
You can play the same program repeatedly as long as you do not cancel time edit or erase the program.

**To cancel time edit**
Press CONTINUE and return to the continuous playing mode.
The program will be erased.

**To check the program**
See page 12.

**To erase the entire program**
Press ■ once during stop; twice during play.
The program is also erased, when you turn off the unit.

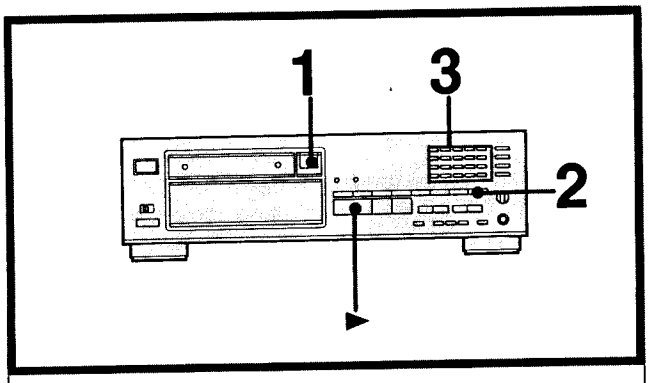
**To include desired selections in the program**
1 Make your own program of the desired selections.
See page 12 for instructions.
2 Follow the procedure as shown on the left column.
Just designate the length of your tape; you need not subtract the length of your program. The unit will place your selections at the beginning of its program and add other selections to fit the remaining time.

***If your disc has more than 25 selections***
Selections over number 25 cannot be programmed with the time edit function; program desired selections before using the time edit function. See page 12 for details.

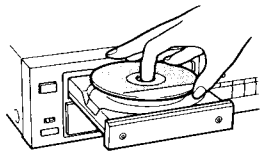
***If any selections remain unprogrammed***
To make a further program, repeat step 5.

***To designate a different time for each side***
Execute steps 1 to 4 and press ❚❚. Then repeat steps 2 and 4.
Do not execute step 5.

# Designating the Playing Order of Up To 6 Discs – Multi-disc Program



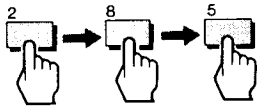

**1**

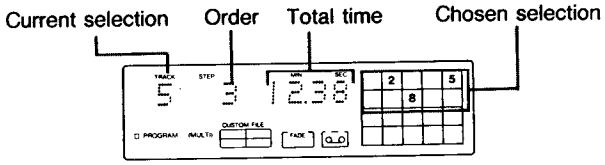


**2**

"DISC-1" is displayed.

**3** Press selection number in desired order. Selections will be programmed in the selected order.




**4** Remove the disc and insert the second disc. "DISC-2" is displayed.

**5** Repeat steps 3 and 4 to program additional selections. Up to 24 selections from up to 6 discs can be programmed. The total playing time from the first disc will be displayed for the time display.

You can make a program by designating up to 24 selections from up to 6 discs in the order you want them to be played.
At the same time, you can adjust the total playing time of the program. This function is convenient for editing tapes.

**To play the program**
Insert the first disc and press ►.
When "NEXT DISC" is displayed, replace with the next disc and press ►. Continue replacing until the last disc.
When playback of the last disc is completed, "END" will be displayed. The unit will return to the initial standby condition of program play from the first disc.

**To check the current disc number**
Press TIME/MEMO during stop. The disc number will be displayed.

**To stop playing**
Press ■.

**To cancel multi-disc program**
Press CONTINUE and return to the continuous playing mode. The program will be erased.

**To program while checking the total time**
Use the ⏮ and ⏭ buttons instead of the numeric buttons to choose the desired selections. Choose a selection with the ⏮ and ⏭ buttons, check the total time, and then press MULTI PGM while the selection number is flashing.

**To check your program**
Press CHECK. Each time you press CHECK, the selection in the program will be displayed along with its selection, order and disc number.
When CHECK is pressed after the last selection, "END" appears and then the display returns to the initial display.

## To change your program

You can make the following changes before starting play.

### To erase the last selection

Insert the last disc programmed and press CLEAR. Each time you press CLEAR, the last selection in the program will be erased. To continue erasing selections, replace the disc accordingly and repeat the procedure.

### To add a selection to the end of the program

Insert a disc and press the numeric buttons for that selection.
You can add a selection during stop.

## To erase the entire program

Press ■ once during stop; twice during play. The program will be erased.

***If you mistake the disc order***

Even if a disc is inserted in an incorrect order, the selections chosen from that disc will be played. However, when a disc which has already been played is inserted, program play will not proceed. In addition, when a seventh disc is incorrectly inserted, "DISC FULL" will be displayed.

***The following functions cannot be conducted on Multi-disc programs.***

- Pause program
- Repeat play
- Time edit
- Time fade
- Program bank
- The tape side (A·B) cannot be displayed.

# Tips on Editing Tapes

The following functions are convenient for editing your own tapes.

## Fading Out at the Desired Time – Time Fade

You can have the play fade out at the end by designating the play duration. Once time fade is set, it functions twice for editing both sides of a tape. You can change discs without cancelling this function. The fade time is preset to 5 seconds, but you can change it between 2 – 10 seconds.
This function cannot be conducted on multi-disc program.

**To set the fade time**

1 Press ■.
2 Press FADER.
3 Press ◄◄/►► to select fade time between 2-10 seconds.

**To set time fade**

1 Press EDIT/TIME FADE twice during stop.
"TIME FADE" is displayed in the window.
2 Set the desired play duration, using numeric buttons.
eg. To set to 27 minutes, press [2][7][10][10].
You need not press buttons for seconds, unless required.
3 To start play, press ►.
After the designated time, play fades out and pauses. Tape side B lights up. Press ❚❚ or ► to resume playing for the other side of the tape. When the play fades out for the second time, the unit pauses and the time fade function is cancelled.

**If your tape is of a standard length**

You can designate the tape length easily with the TIME SET button.
Press TIME SET in step 2 above. Each time you press TIME SET the display changes to give you the following duration:

23.00(C-46) → 27.00(C-54) → 30.00(C-60) → 45.00(C-90)
↑ OFF ←

**If you want to start the play fading in**

1 Press ❚❚.
The unit enters the pause mode.
2 Press EDIT/TIME FADE once.
"TIME FADE" is displayed.
3 Set the desired play duration, following step 2 above.
4 To start play, press FADER,
Play will start fading in and end at the set time fading out.

**To resume play after fading out**

Press ❚❚ or FADER. (Pressing FADER starts the play fading in.)

**To cancel time fade**

Time fade will be cancelled when
– EDIT/TIME FADE is pressed once again.
– ◄◄/►► is pressed during play.

***When the OPTICAL DIGITAL OUT is connected***

The time fade function cannot be used.

***To display the time remaining until the time set***

Press TIME/MEMO twice.

## Fading In/Fading out

You can have the play fade in and fade out between 2 – 10 seconds.
When no time is specified, the play will fade in and fade out for 5 seconds.

**To end the play fading out**
Press FADER when you want to start fading out.
"FADE ▮▮► " flashes in the window, and play fades out and enters the pause mode.

**To restart the play fading in**
Press FADER in the pause mode.
"FADE ◄▮▮ " flashes in the window, and play fades in.

**To set the fade time**
See page 18.

## Inserting a Blank Space between Selections – Auto Space

You can insert a 3-second blank space between each selection. The blank space enables you to locate selections when using a tape deck with the automatic selection search function.

Before starting play, press AUTO SPACE so that "AUTO SPACE" is displayed in the window.
A blank space of approximately 3 seconds will be inserted between each selection.

**To cancel the auto space function**
Press AUTO SPACE so that "SPACE OFF" appears in the window.

## Locating the Loudest Portion of the Disc – Peak Search

The unit will scan a disc from beginning to end and determine the loudest portion (peak level) of the disc, and then play that portion repeatedly. This function will make it easier for you to adjust to the optimum level when recording on tape. You can use this function in the continue, delete shuffle and program play modes.

**To set peak search**
Press PEAK SEARCH in the stop mode. "PEAK" flashes in the window. The entire tracks in a disc or program will be searched automatically. The loudest portion will be played repeatedly for 4 seconds.

**To start play immediately**
Press ►.

**To stop peak search**
Press ■.
Press ▮▮ to pause at the first selection.

***Note on peak search function***
The unit determines the loudest portion (peak level) of a disc by searching it at fixed intervals: As a result, the portion searched may differ from the actual peak level. In addition, this function may determine different portions as the peak level for the same disc. However, the difference between the portion searched and the actual peak level is insignificant and will not present any problem in adjusting the recording level.

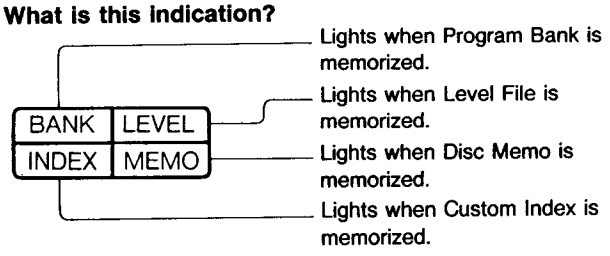
# On Custom Files

The CD player incorporates a memory in which you can store four types of informations called "custom files".

## Four custom files you can store in memory

| | |
|---|---|
| Program bank | A programmed playing order you store in memory for a disc, so that the disc can be played always in a fixed order. (page 21) |
| Disc memo | You can assign a title within 10 letters to each individual disc. (page 22) |
| Custom Index | You can assign up to 10 index points on anywhere you want on a disc. (page 23) |
| Level file | You can assign a playback level to each individual disc, so that the disc can be played automatically on a fixed playback level. (page 24) |

**What is this indication?**




**Memory backup for the custom files**
Custom files, once memorized, are retained in the compact disc player's memory for approximately 1 month without AC power supply.

**How many discs can be assigned custom files?**
You can give custom files to up to 185 discs.

**However the following operations are counted as two discs.**
- When Disc Memo, Custom Index and Program Bank are memorized for one disc.
- When more than 9 Custom Indexes and Disc Memo are memorized for one disc.
- When Custom Index and Program Bank are memorized for one disc.

Since the memory is stored in the player and not on the disc, you cannot perform custom file functions with the same disc on a different player.

***Custom File Last Mode Memory***
The last play mode (current play mode, repeat, auto space and fade time) of a disc containing custom files will be retained in the unit's memory when the disc is removed from the unit. When the disc is inserted again, the last play mode will be recalled. However, if you press the ► button while the disc table is open, the current play mode will take priority over the last play mode memorized.

***What is this indication?***

FILE FULL — This indication appears when FILE is pressed while no custom file can be memorized for the disc currently put in the player. To make a custom file for the disc, clear the custom file of another disc.

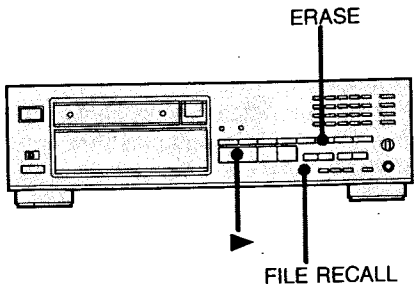
***To clear all custom files of a disc at once***
Press FILE RECALL without the disc in the player and press ERASE. The disc memo and program bank (or the disc memo and custom indexes) are all cleared and "FILE ERASE" appears.

***To clear custom files or to reset memory of all discs at once***
Press POWER to turn on the player while keeping ERASE and FILE pressed.

***To check the items of the custom files***
Press FILE RECALL (while "– NO DISC –" is displayed) without the disc inserted. Each time you press FILE RECALL, the items of the custom files and items of the each column of CUSTOM FILE BANK LEVEL INDEX MEMO about the disc are displayed. If you press FILE RECALL when the last disc's information is displayed, END is displayed and returns to "– NO DISC –" after a few seconds.

# Keeping the Program in Memory – Program Bank

## Memorizing Program




**1** Program the selections (page 12).

**2** Press FILE.

When "BANK" lights, the program is memorized for the program bank.

After programming selections, you can keep the program memorized, so that the disc is played always in the fixed order. The memorized program is called "program bank". One program bank can be made for a disc.

**To change the program bank**
Program the selections again and press FILE.

## Playing the Disc Using the Program Bank

**Before inserting a disc**

1 Press PROGRAM.
"PROGRAM" appears.
2 Press ⏏ and put the disc in the disc compartment.
3 Press ►.

**When the disc is in the disc compartment**

1 Press FILE RECALL during stop.
"PROGRAM" appears and the memorized program will be recalled.
2 Press ►.

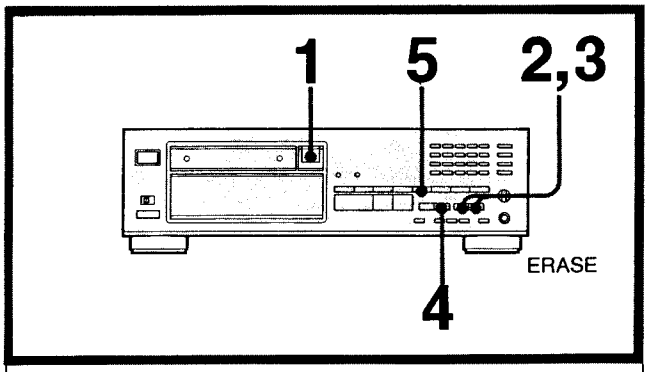
***To play the selections in another program without clearing the program bank***
Put the disc in the disc compartment, press PROGRAM to program the selections as you want, and press ►. The disc will be played in the newly programmed order.
The memorized program bank won't be cleared. (Press FILE RECALL to check the program bank.)

***To play a disc having a program bank in other modes***
To play a disc having a program bank in other modes. Put the disc in the disc tray, set the player in the desired play mode and press ►.

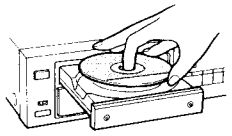
## Clearing the Program Bank

1 Put the disc whose program bank is to be cleared in the player.
2 Press FILE RECALL.
3 Press ERASE.
When "FILE ERASE" is displayed and "BANK" disappears the program bank is cleared.

# Assigning Names to a Disc – Disc Memo



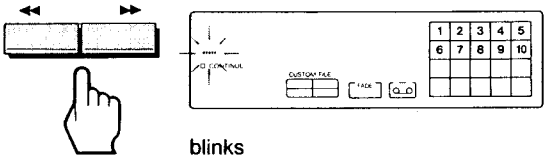

## 1



Make sure that the total number of selections and the total playing time is displayed. Then proceed as follows in the stop mode.

## 2

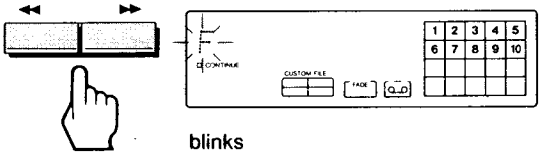
A blinking cursor (indicating where a letter will be written) appears.



blinks

## 3

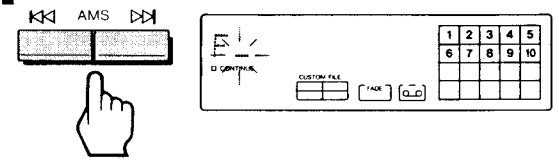
Press ◀◀ or ▶▶ until the desired letter appears.
Example: If ▶▶ is pressed 7 times, F appears.



blinks

## 4

Move the cursor to select the next letter.




Repeat steps 3 and 4 to complete the memo.

## 5

"FILE" appears in the window. After about 1 second, the memo you have written will be displayed.
Each time the disc is put in the compact disc player, the memo will be displayed.

Using the disc memo function, you can assign a name within 10 letters for each disc. The memo appears in the window every time you put the disc in the player.
One name can be assigned for one disc.
"–NO DISC–" can be changed to a desired indication.

### Usable letters and symbols

For the disc memo, 45 letters and symbols and space can be used. When the ◀◀/▶▶ button is pressed for the first time, the space appears. Each time ▶▶ is pressed, letters and symbols will appear in the following order.

(space) A B C D E F G H I J K L M N O P Q R S T U V W X Y Z & : . < > * / + 9 8 7 6 5 4 3 2 1 0 –

Use ◀◀ to call up a previous character.

### To rewrite letters or symbols

**Before pressing FILE.**
Move the cursor under the letter/symbol to be changed, and then select the desired letter/symbol using ◀◀/▶▶.
To erase the letter and make space, locate the desired place with ⏮/⏭ and press CLEAR.

**After pressing FILE**
Repeat from step 2.

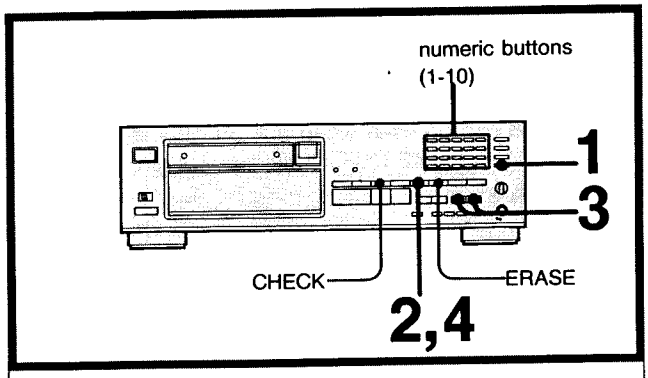
## Clearing the disc memo

1 Put the disc whose memo you want to clear in the player.
2 Press ◀◀ or ▶▶ on the player.
The blinking cursor will appear.
3 Press ERASE.
"FILE ERASE" is displayed in the window.

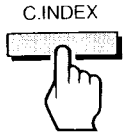
***If you press TIME/MEMO during stop***
Each time you press TIME/MEMO, the memorized memo appears and disappears.

***To display the playing time of the disc whose memo has already been memorized***
When the total remaining time of the disc is displayed, if you press TIME/MEMO, memo will be displayed.

# Giving a Disc Indexes as You Want – Custom Index

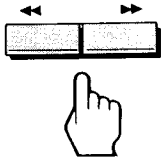



**1** Press C. INDEX during play.




**2** Press FILE where you want to assign a custom index. "REHEARSAL" appears in the display window and the portion for 3-second from the point where you pressed FILE is played repeatedly (rehearsal play).

**3** Adjust the repeat start point using ◀◀ or ▶▶. Press ▶▶ to shift the repeat start point forward and ◀◀ to shift it backward. Pressing ◀◀ ▶▶ 7 times shift the point by approximately 1 second.



**4** Press FILE to store the custom index. The custom index is assigned to the repeat start point.

**5** You can assign custom indexes up to 10 positions by repeating steps from 2 to 4.

A custom index is a special index that can be assigned to any position you want on the disc. If you assign custom indexes to the positions on a disc, you can easily locate the positions during play, or enjoy repeat play between two adjacent custom indexes.

**If you press FILE in the pause mode**

The rehearsal play is not made and the custom index is assigned immediately at the position where FILE is pressed.

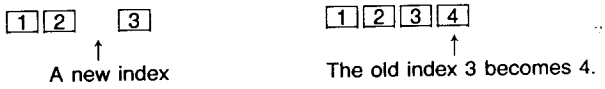
**To release rehearsal play**

Press CLEAR. Normal play is resumed.

***If a new custom index is assigned to a position preceding another index***

Previously existing indexes will be shifted as follows.

Example: If you assign a new index between 2 and 3.




***During custom index mode***

You cannot use the normal index search, however, search of custom index function is possible.

## Playing from Desired Custom Index

### To play from an index to the end of the disc

1 Press C.INDEX.
2 Select the desired custom index by pressing the corresponding numeric button 1 through 10.

### To play from one index to the next

1 Press C.INDEX twice so that "C. INDEX (SINGLE)" is displayed.
2 Select the desired custom index by pressing the corresponding numeric button 1 through 10.

***To play repeatedly between adjacent indexes.***

Press REPEAT between steps 1 and 2 above. To cancel repeat paly, press REPEAT again.

### To access an index during play

1 Press C.INDEX.
2 Press ◀—/—▶ on the remote commadner.
—▶: Accesses the next index.
◀—: Returns to the preceding index.
(to go further back, use the numeric buttons.)

***To change the play mode during play using custom indexes***

During play using custom indexes (in other words, while the music calendar is not displayed), the play mode switches from continuous play to single play and vice versa each time C. INDEX is pressed.

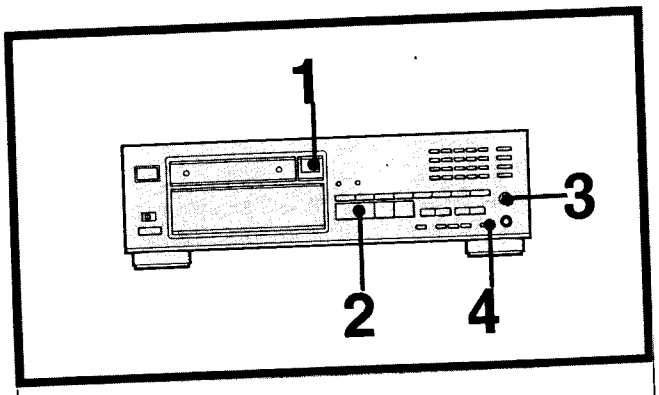
***To release play using custom indexes***

Press one of the PLAY MODE buttons (PROGRAM, SHUFFLE or CONTINUE). The music calendar appears.

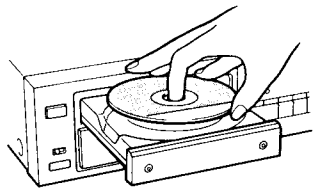
## Clearing Custom Indexes

1 Press C.INDEX.
C.INDEX appears.
2 Press CHECK.
Each time you press CHECK, index number blinks.
Select the index number you want to delete.
3 Press ERASE while index number blinks.
The specified index will be erased and the succeeding index numbers will move up one.

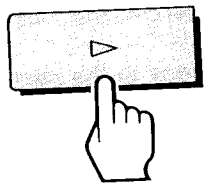
# Storing an Optimum Playback Level for Each Disc – Level File



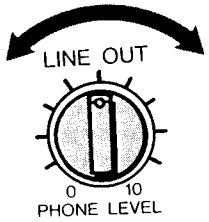

**1**



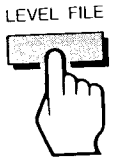
**2** Press ► to start play.



**3** Adjust to the desired playback level.




**4** Press LEVEL FILE to have the playback level memorized.



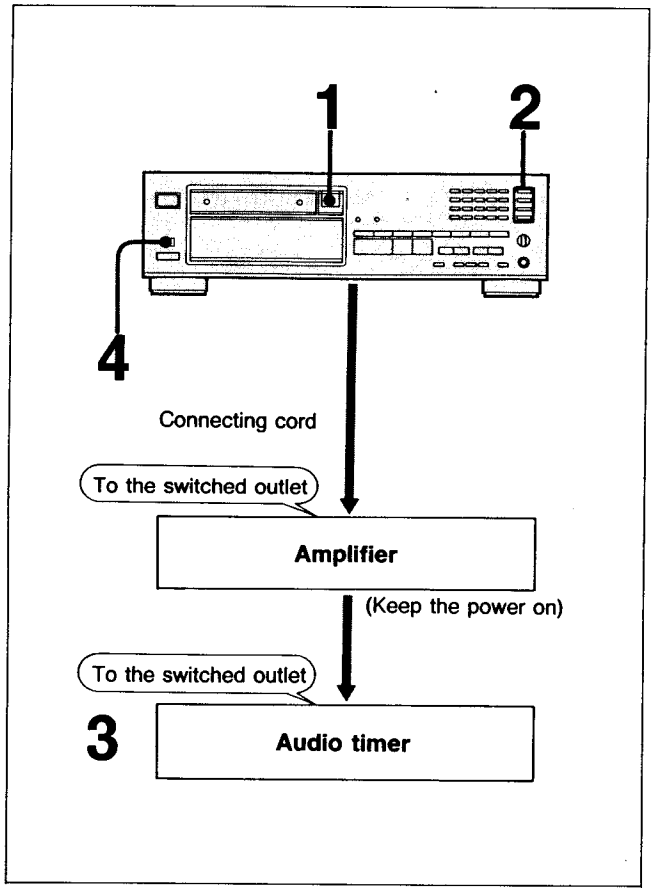

You can have the unit memorize an optimum playback level for each individual disc. Each time you play a disc, the volume will be set to the level memorized for that disc.
This function can be used when the amplifier is connected to the VARIABLE LINE OUT terminals or when headphones are used.

**To play the disc using the level file**
Each time the disc is inserted into the player, the LINE OUT/PHONE LEVEL control will automatically turn to the designated playback level.

**To clear level file**
1 Insert a disc in the compartment.
2 Press LEVEL FILE.
3 Press ERASE.

**When the playback level is changed**
Press FILE RECALL during stop.
The LINE OUT/PHONE LEVEL control will automatically be reset to the memorized playback level.

# Timer Activated Playing




By connecting a commercially available timer, disc play of the desired play mode can be started at any desired time.

**1** Insert a disc in the compartment.

**2** Select the desired play mode.

**3** Set the timer.

**4** Set TIMER to PLAY.

**Keep the POWER switch depressed on the player**
When the timer is set, the power of the player will be cut off.
However, be sure to leave the POWER switch on.

**When the timer-activated play ends**
Be sure to set TIMER to OFF. If the TIMER switch is left at PLAY, the unit will automatically start playing the next time the power is turned on.

**To play in the program play mode**
Make a program bank (page 21) and then prepare for timer activated playing.

**If you select the custom index play mode**
Play begins from custom index 1.

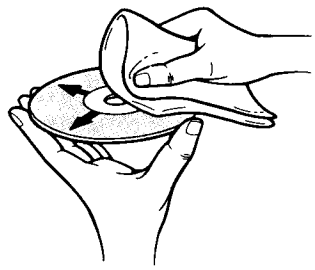
# Maintenance

## Cleaning Your Unit

Clean the cabinet, panel and controls with a soft cloth lightly moistened with a mild detergent solution. Do not use any type of abrasive pad, scouring powder or solvent such as alcohol or benzine.

## Cleaning Discs

When a disc becomes dirty, clean it with a cleaning cloth. Wipe the disc from the center out.



Do not use solvents such as benzine, thinner, commercially available cleaners or anti-static spray intended for analog discs.

# Specifications

### Compact disc player

| | |
|---|---|
| Frequency response | 2 Hz – 20 kHz ±0.3 dB |
| Signal to noise ratio | More than 113 dB |
| Dynamic range | More than 100 dB |
| Harmonic distortion | Less than 0.0020% |
| Channel separation | More that 110 dB |

### Outputs

| | |
|---|---|
| LINE OUT (FIXED) (phono jacks) | Output level 2 V (at 50 kiloohms)<br>Load impedance over 10 kiloohms |
| LINE OUT (VARIABLE) (phono jacks) | Output level max. 2 V (at 50 kiloohms)<br>Load impedance over 50 kiloohms |
| DIGITAL OUT (OPTICAL) (optical output connector) | Wave length 660 nm<br>Output level −18 dBm |
| HEADPHONES (stereo phone jack) | Output level max. 28 mW<br>Load impedance 32 ohms |

### General

| | |
|---|---|
| Power requirements | AC120 V, 60 Hz |
| Power consumption | 20 W |
| Dimensions | Approx. 430×125×375 mm (w/h/d) ($17\times5\times14^{7}/_{8}$ inches)<br>Including projecting parts and controls |
| Weight | Approx. 10 kg (22 lbs 1 oz), net |

### Remote commander RM-D590

| | |
|---|---|
| Remote control system | Infrared control |
| Power requirements | 3 V DC with two batteries size AA (IEC designation R6) |
| Dimensions | 67×18×175 mm (w/h/d) ($2^{3}/_{4}\times{}^{23}/_{32}\times7$ inches) |
| Weight | 150 g (5.3 oz)<br>Including batteries |

### Supplied accessories

Connecting cord (1)
(2 phono plugs ↔ 2 phono plugs)
Remote commander (1)
R6 (Size AA) batteries (2)

### Optional accessory

Audio Optical connecting cord POC-15

Design and specifications subject to change without notice.

# Troubleshooting Guide

Before going through the check list below, first refer back to the connections and operating procedures. Should any problem persist after you have made these checks, consult your nearest Sony service facility.

| Symptom | Cause | Remedy |
|---|---|---|
| The disc tray does not close. | The disc is not placed correctly. | Place the disc correctly on the disc tray. |
| Play does not start. | Dirty disc. | Clean the disc. |
| | The disc is inserted upside down. | Insert the disc with the printed side up. |
| | The player is in the pause mode. | Press ❚❚ or ► to release pause. |
| | Moisture condensation. | Leave the player turned on for approximately one hour. |
| "NO DISC" is displayed | There is no disc in the unit. | Insert a disc. |
| Play begins only by turning on the power. | The TIMER switch is set to PLAY. | Set the TIMER switch to OFF. |
| Display window does not illuminate even when the power is turned on. | The DISPLAY MODE button was pressed. | Press the button again. |
| Sound is not heard. | Loose connection. | Insert the plug firmly. |
| | Connection is incorrect. | Check the connection refering to "Connections". |
| | The LINE OUT/PHONE LEVEL control is set to the minimum. | Turn the control clockwise. |
| Play does not begin from the first selection. | The player is in the PROGRAM, or SHUFFLE or C. INDEX mode. | Press CONTINUE. |
| The remote commander does not operate the unit. | The batteries are run down. | Replace both batteries. |
| | The remote commander is not pointed at the remote sensor. | Point the remote commander at the sensor. |
| | There is an obstacle between the remote commander and the unit. | Remove the obstacle. |
| | The remote commander is too far from the unit. | Move closer. |
| Any operation is not possible. | The internal control program may not run. | Turn off the power and turn it on again. |